

a feed channel (28, 28b) in the coater head in fluid communication with the mixing chamber for receiving coating from the mixing chamber;

a baffle (30, 30b) mounted in the apparatus and operatively associated with the feed channel (28, 28b) and having an edge (32, 32b) disposed in spaced adjacency with the surface (15) of the backing roll, and [substantial] substantially parallel thereto, so as to form an overflow gap (60, 60b) with either the paper web surface to be coated, when the web is supported on the backing roll surface, or the backing roll surface, when the paper web is not supported on the backing roll surface, and to provide for the escape of coating therethrough when coating is flowed through the feed channel;

a coating chamber (18, 18b) in the coater head in fluid communication with the feed channel, and so constructed and arranged as to be open toward the backing roll for applying a film of coating to either the paper web surface to be coated, when the web is supported on the backing roll surface, or on the backing roll surface, when the paper web is not supported on the backing roll surface;

recirculation means (48, 50, 54, 58; 48b, 50b, 54b, 58b) in the coater head, and in fluid communication with the coating chamber and the mixing chamber for returning coating from the coating chamber to the mixing chamber to be combined with the fresh coating, and to establish, together with the feed channel, a continuous flow loop for circulation of coating within the coater head;

[the recirculation means including a channel (54) being so constructed and arranged as to direct the flow of returning coating into the mixing chamber at an acute angle to the flow of fresh coating received in the mixing chamber from the inlet] the recirculation means including a plurality of flow-metering orifices (58, 58b) linking a channel (54, 54b) with the mixing chamber (26, 26b), said orifices being so constructed and arranged as to form an acute angle with the inlet (24, 24b).